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Group Art Unit: 3765

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Figure 2, illustrates a method for capturing in two spectral bands simultaneously and in any spatial point of the area under analysis, the kinetics of the alterations in the characteristics of the light remitted from the tissue, before and the after the administration of the contrast enhancing agent. The light remitted from the tissue, is collected and focused by the optical imaging module (L) and passes through a beam splitting (BSP) optical element. Thus, two identical images of the tissue (T) are generated, which can be captured by two detectors (D1, D2). In front of the detector, appropriate optical filters (Of1), (Of2) can be placed, so that images with different spectral characteristics are captured. Besides beam splitters, optical filters, dichroic mirrors etc, can also be used for splitting the image of the object. The detectors (D1), (D2) are synchronized so that they capture simultaneously the corresponding spectral images of the tissue (Ti1), (Ti2) and in successive time-intervals, which are stored in the computer's data storage means. Generalizing, multiple spectral images can be captured simultaneously by combining multiple splitting elements, filters and sources.

In the claims:

Please cancel claims 1-16, without prejudice, and add new claims 17-22 as follows:

17. A method of diagnosing disease in a subject, comprising:
applying a pathology differentiating agent on a tissue;
providing an automated triggering signal to initiate a measurement period relative to said applying step;
measuring a temporal evolution of an optical signal observed from said tissue during said measurement period; and
providing a diagnosis based upon said temporal evolution.

C2
18. The method of claim 17, wherein said triggering signal is provided substantially simultaneously with said dispensing step.

19. The method of claim 17, wherein said measuring step comprises measuring said temporal evolution at at least one predetermined time relative to said triggering signal.

20. A method for diagnosing disease in a subject, comprising:
dispensing a pathology differentiating agent on a tissue;
capturing a plurality of sequential images of said tissue during a measurement period;
aligning a subset of said plurality of images to spatially correlate said subset;